

5      **Claims**

1. A method for manufacturing an ultra-high-tensile sheet method product of steel, at which the initial work piece used is constituted of a metal work piece of iron, alloyed with chromium, nickel and carbon in predetermined proportions, **characterized in** that the initial work piece is wholly or partially plastically cold worked by stretch forming or stretch bending at a predetermined temperature and/or deformation degree, that determines and is determining for the yield point of the final product, in providing a strong deformation hardening, that gives the final product a totally or partially many times increased strength or higher yield point, as compared to the yield of the initial work piece.

20     2. A method according to claim 1, **characterized in** that the work piece consisting of iron that is plastically cold worked has been alloyed with 17% C, 7% Ni and 0,1% C.

25     3. A method according to claim 1, **characterized in** that the alloyed work piece is formed in traditional machines for stretch forming or stretch bending but by aid of a modified tool to have an adapted deformation of said metal work piece in order to increase its yield point from an originally low yield point to a final product, that completely or partially obtains a high yield point.

35     4. A method according to claim 1, **characterized in** that the alloyed work piece is formed in traditional machines for stretch forming or stretch bending that by aid of a modified, partly temperature regulated tool to have an adapted temperature in relation to the deformation which takes place during the stretch forming or stretch bending operation in order to increase its yield point from an originally low yield point to a final product, that completely or partially obtains a high yield point.

40     5. A method according to any of the preceding claims, **characterized in** that the stretch forming or stretch bending

5 is made in two or several steps, whereby a stronger deformation hardening is achieved.

10 6. A method according to claim 1, 2 or 3, **characterized in** that the original low yield point is about 300 MPa and a higher one is more than 700 MPa or from a medium high level of about 700 MPa to a higher level of about 1000 MPa or higher.

15 7. A method according to claim 1, 2 or 3, **characterized in** that the initial work piece is completely or partially cooled or is kept at a controlled temperature before and during forming operation to obtain a controlled, high strength independently of the degree of the deformation during the forming operation.

20 8. A method according to any of the preceding claims, **characterized in** that the temperature, to which the work piece completely or partially has been cold to or the temperature that totally or partially is maintained during the forming operation is  $-196^\circ \leq T \leq 70^\circ\text{C}$ , is determining for the strength of the final product.

25 9. A method according to any of the preceding claims, **characterized in** that the final sheet product is totally or partially cooled or is kept at a controlled temperature in obtaining a controlled strength increasing independently of the degree of the deformation during the forming operation.

30 35 10. A method according to claim 8, **characterized in** that the temperature, to which the final product completely or partially is cold to or the temperature that is maintained after the forming operation is  $-196^\circ \leq T \leq 70^\circ\text{C}$ .